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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/327,351	06/05/1999	STANISLAV I. IONOV	PD-970411	5316

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EXAMINER

PHAN, HANH

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 05/06/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/327,351

Applicant(s)

IONOV ET AL.

Examiner

Hanh Phan

Art Unit

2633

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 18.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the RCE filed on 04/07/2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 7-9, 11-26, and 28-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Lenormand et al (US Patent No. 6,545,787).

Regarding claims 1, 22, 30 and 31, referring to Figures 1-6, Lenormand discloses a satellite constellation comprising:

a plurality of satellites (i.e., constellation of satellites comprises 96 satellites around the earth, Fig. 1), each of the satellites (i.e., satellite Sn, Fig. 6) having an RF ground link for communicating with a ground station (i.e., a ground station 74, Fig. 6) and an optical link for communication with at least one of the plurality of satellites (Figs. 5 and 6);

each of the satellites having a reconfigurable optical transmitter and a reconfigurable optical receiver for sending and receiving data streams, each

reconfigurable optical transmitter having an optical carrier associated therewith (Figs. 5 and 6, col. 2, lines 1-8, col. 4, lines 22-39 and lines 66-67 and col. 5, lines 1-29);

the plurality of satellites (Fig. 1) arranged to have a first subset of satellites (i.e., a first subset of satellites 20, 22, 24 and 26, Fig. 2), the first subset of satellites configured to communicate therebetween as a first local area network over a landmass (col. 2, lines 9-15 and lines 24-29, col. 3, lines 27-59 and col. 5, lines 21-29);

the plurality of satellites (Fig. 1) arranged to have a second subset of satellites having at least one satellite different than that of the first subset and at least one second satellite the same as the first subset, the second subset of satellites are configured to communicate therebetween as a second local area network over the landmass (col. 3, lines 27-59 and col. 5, lines 21-29).

Regarding claims 2, 12, and 23, Lenormand further teaches each of the plurality of satellites comprises a communications table (i.e., routing unit 88)(Fig. 6).

Regarding claims 3, 13, 24 and 32, Lenormand further teaches the communications table has plurality of routes for communicating between satellites in the first subset (Fig. 6, col. 5, lines 25-67 and col. 6, lines 1-14).

Regarding claims 4, 5, 15, 16, 25 and 26, Lenormand also teaches that the reconfigurable optical transmitter comprises an array of laser diodes (92)(Fig. 6).

Regarding claims 7 and 8, Lenormand further teaches the satellites are in low earth orbit (col. 1, lines 9-20 and col. 2, lines 58-65).

Regarding claim 9, Lenormand further teaches the first and second subsets are aligned with a landmass (Figs. 1-6).

Regarding claims 11, 18, 28 and 29, referring to Figures 1-6, Lenormand discloses a global communications system comprising:

a plurality of satellites spaced about the earth (i.e., constellation of satellites comprises 96 satellites around the earth, Fig. 1);

a first subset of the plurality of satellites (i.e., satellites 20, 24, 26 and 22, Fig. 2) forming a local area network over a landmass, the first subset of satellites having a first plurality of optical carriers assigned thereto for intercommunication (col. 2, lines 1-8, col. 4, lines 22-39 and lines 66-67 and col. 5, lines 1-29);

the first subset having a second plurality of optical carriers assigned for communicating with other satellites outside of the subset (Figs. 4 and 5, col. 4, lines 22-67 and col. 5, lines 1-32 and col. 3, lines 27-59).

Regarding claim 14, Lenormand further teaches each of the satellites comprises a reconfigurable optical transmitter and a reconfigurable optical receiver (Figs. 1-6).

Regarding claims 17 and 21, referring to figures 1-6, Lenormand discloses a method of communicating within a satellite communications system comprising the steps of:

deploying a plurality of satellites (i.e., constellation of satellites comprises 96 satellites around the earth, Fig. 1);

grouping a first subset of the plurality of satellites (i.e., satellites 20, 24, 26 and 22, Fig. 2) into a first local area network over a first landmass, the first subset having fewer than the plurality of satellites (Figs. 5 and 6, col. 5, lines 4-67 and col. 6, lines 1-14);

forming a plurality of routes between the satellites in the first local area network (Figs 5 and 6); and

assigning an optical carrier for each route (Figs. 5 and 6).

Regarding claims 19 and 20, Lenormand further teaches wherein the step of assigning an optical carrier comprises the step of obtaining the optical carrier and route from a respective optical wavelength selector and communication table and the step of assigning comprises the step of reusing the optical carriers (Figs. 5 and 6, col. 5, lines 4-67 and col. 6, lines 1-14).

Regarding claim 33, Lenormand further teaches the first landmass and second landmass are coincident (col. 2, lines 9-15 and lines 24-29 and col. 3, lines 27-59).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 10 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenormand et al (US Patent No. 6,545,787).

Regarding claims 6 and 27, it would have been obvious to obtain the reconfigurable optical receiver is one from the group consisting of a Fabry-Perot filter, a

wavelength division multiplexer, and a fiber grating based optical switch in order to select and distribute the signals to the user terminals.

Regarding claim 10, Lenormand differs from claim 10 in that he does not specifically teach the subset comprises seven satellites using three optical carriers. However, it would have been obvious to obtain the subset comprises seven satellites using three optical carriers in order to allow to allocate transmission capacity in the satellite data communication network and reduce the interference between the signals.

Response to Arguments

6. Applicant's arguments filed 04/07/2004 have been fully considered but they are not persuasive.

The applicant's arguments to claims 1-33 are not persuasive. Applicant argues that Lemormand reference fails to teach the limitation **"the plurality of satellites arranged to have a first subset of satellites, the first subset of satellites configured to communicate therebetween as a first local area network over a landmass and the plurality of satellites arranged to have a second subset of satellites having at least one satellite different than that of the first subset and at least one second satellite the same as the first subset, the second subset of satellites are configured to communicate therebetween as a second local area network over the landmass".** The examiner respectfully disagrees. Lenormand teaches a constellation of satellites comprises 96 satellites around the earth (Fig. 1), each of the satellites (i.e., satellite Sn, Fig. 6) having an RF ground link for

communicating with a ground station (i.e., a ground station 74, Fig. 6) and an optical link for communication with at least one of the plurality of satellites (Figs. 5 and 6). These satellites arranged to have a first subset of satellites (i.e., a first subset of satellites 20, 22, 24 and 26, Fig. 2), the first subset of satellites configured to communicate therebetween as a first local area network over a landmass (col. 2, lines 9-15 and lines 24-29, col. 3, lines 27-59 and col. 5, lines 21-29). Also, these satellites are arranged to have a second subset of satellites having at least one satellite different than that of the first subset and at least one second satellite the same as the first subset, the second subset of satellites are configured to communicate therebetween as a second local area network over the landmass (As indicated in Figs. 1-6, because of the movement of the satellite when the satellite leaves the area concerned, another satellite takes over from it, see col. 1, lines 38-42, col. 3, lines 27-59 and col. 5, lines 21-29).

Therefore, it is believed that the limitations of claims 1-33 are still met by Lenormand and the rejection is still maintained.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (703)306-5840.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Art Unit: 2633

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Hanh Phan

Hanh Phan

Patent Examiner

Art Unit 2633

04/30/04